

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-11. (Canceled)

12. (New) An inhalation device for transpulmonary administration comprising:

a housing;

a mouthpiece provided at one end of the housing;

a chamber accommodated in the housing for containing a pharmaceutical composition which is pulverized into fine particles by an air-generated impact for dispersal in air;

an air inlet flow path, by inhalation of a user, for introducing to the chamber outside air and for injecting outside air toward the pharmaceutical composition to apply an air-generated impact to the pharmaceutical composition;

an inhalation flow path having a suction port located inside the chamber to inhale the pulverized pharmaceutical composition; and

an auxiliary flow path for inhaling outside air which does not flow via the chamber, the auxiliary flow path opening around the inhalation flow path in the direction of the air flow of the inhalation flow path such that the auxiliary air flowing out from the auxiliary flow path does not disturb the air flow of the inhalation flow path.

13. (New) An inhalation device for transpulmonary administration according to claim 12, wherein:

the mouthpiece is provided with a mouth-side flow path which communicates with the inhalation flow path;

the auxiliary flow path for directly inhaling outside air does not communicate with the inhalation flow path and the mouth-side flow path; and

the inhalation device for transpulmonary administration is configured such that air-generated impact is applied to the pharmaceutical composition by outside air which flows into the chamber by inhalation-induced pressure generated when a user inhales air, and the pulverized pharmaceutical composition is introduced to the mouth-side flow path, and at the same time outside air is directly introduced to the auxiliary flow path by the inhalation-induced pressure.

14. (New) An inhalation device for transpulmonary administration according to Claim 12, wherein:

the mouthpiece is provided with a mouth-side flow path which communicates with the inhalation flow path and a divider having an orifice in at least one of the mouth-side flow path or the inhalation flow path for reducing the diameter of the flow path by forming a step part; and

the inhalation device for transpulmonary administration is configured such that air-generated impact is applied to the pharmaceutical composition by outside air which flows into the chamber by inhalation-induced pressure generated when a user inhales air so that the pulverized pharmaceutical composition is introduced to the inhalation flow path and the mouth-side flow path, and also passes through the orifice.

15. (New) The inhalation device for transpulmonary administration according to Claim 14, wherein a plurality of dividers each having an orifice are provided at spaced intervals.

16. (New) The inhalation device for transpulmonary administration according to Claim 12, wherein

the mouthpiece is provided with a mouth-side flow path which communicates with the inhalation flow path, and the auxiliary flow path for inhaling outside air is not used for applying air impact to the pharmaceutical composition, and does not flow via the chamber, and furthermore allows the inhaled outside air to flow into the mouth-side flow path through an air outlet which opens into the mouth-side flow path, the air outlet opening in the air discharge direction of the mouth-side flow path and being formed in a ring shape along the inner circumferential wall surface of the mouth-side flow path; and

the pharmaceutical composition is pulverized by air impact generated by outside air flowing into the chamber by inhalation-induced pressure that is generated when a user inhales air, and the pulverized pharmaceutical composition flows into the mouth-side flow path surrounded by outside air flowing into the mouth-side flow path from the ring-shaped air outlet.

17. (New) The inhalation device for transpulmonary administration according to Claim 16, further comprising a divider having an orifice for reducing the diameter of the flow path formed in the mouth-side flow path,

wherein outside air containing the pulverized pharmaceutical composition passes through the orifice, and thereafter is surrounded by outside air flowing into the mouth-side flow path from the ring-shaped air outlet.

18. (New) The inhalation device for transpulmonary administration according to Claim 17, wherein the flow-path length of the orifice is elongated in the air discharge direction of the mouth-side flow path.

19. (New) The inhalation device for transpulmonary administration according to Claim 12, further comprising an unsealing member for releasing the sealed condition of a vessel provided by a sealing member, the vessel being accommodated in the chamber, containing a non-powder cake-like pharmaceutical composition which disperses in air by an air-generated impact, and sealed by the sealing member,

wherein the vessel is unsealed by the unsealing member to establish communication between the chamber and the inside of the vessel; and

air-generated impact is applied by inhalation-induced pressure to the pharmaceutical composition contained in the vessel.

20. (New) The inhalation device for transpulmonary administration according to Claim 12, further comprising a check valve to prevent the pulverized pharmaceutical composition from flowing from the air inlet flow path to the outside.

21. (New) The inhalation device for transpulmonary administration according to Claim 12, further comprising a divider for dividing the inhalation flow path, the divider having an orifice for reducing the diameter of the inhalation flow path and being located downstream of the air inlet port,

wherein the housing comprises a main body formed cylindrically and a vessel provided detachably at the end of the main body;

the chamber is formed by the vessel for containing a pharmaceutical composition which is pulverized into fine particles by an air-generated impact for dispersal in air; and

the inhalation flow path is formed from the inner side space of the main body, the mouth piece and the vessel, the inhalation flow path being for flowing outside air containing the fine particles of the pharmaceutical composition from the vessel-side toward the mouthpiece-side.

22. (New) The inhalation device for transpulmonary administration according to Claim 21, wherein

the air inlet port is formed between the main body and the vessel by means of a notch provided at the end of the main body; and

the auxiliary flow path is formed between the mouthpiece and the divider by means of a notch formed at the outer circumferential surface of the divider.

23. (New) The inhalation device for transpulmonary administration according to Claim 21, wherein the inhalation flow path has such a capacity that an air-generated impact can be applied to the pharmaceutical composition by outside air which is fed from the air inlet port into the inhalation flow path located upstream of the divider by an air inhalation of the user.

24. (New) The inhalation device for transpulmonary administration according to Claim 21, wherein

the auxiliary flow path is provided with an air outlet which opens into the inhalation flow path of the mouthpiece; and

the air outlet is provided at such a position that outside air flowing in from the air outlet is inhaled into the mouth of the user without passing through the orifice.